

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-10 (Canceled).

Claim 11 (New): A discharge lamp lighting apparatus comprising:

a DC power supply for supplying power to a discharge lamp;

a conversion circuit, including a switching element, for converting the voltage of the DC power supply into a high frequency; and

an LC resonance circuit between the discharge lamp and the conversion circuit;

wherein by opening and closing operations of the switching element, power supply from the DC power supply to the discharge lamp is intermittently performed, and wherein when the power is not supplied from the DC power supply, a resonance current passing through the resonance circuit is circulated through the switching element.

Claim 12 (New): The discharge lamp lighting apparatus according to claim 11, wherein the conversion circuit includes: a transformer; a power supply switching element connected between the DC power supply and a primary winding of the transformer; and first and second switching elements that are connected to a primary side of the transformer,

wherein the resonance current passing through the LC resonance circuit is circulated through the transformer on the primary side of the transformer.

Claim 13 (New): The discharge lamp lighting apparatus according to claim 12, wherein ON/OFF timings of the power supply switching element are determined on the basis of a period of a current passing through a secondary winding of the transformer.

Claim 14 (New): The discharge lamp lighting apparatus according to claim 13, wherein ON/OFF operations of the power supply switching element are performed by a time period that is $N/2$ times a period (where N is a natural number) of a current passing through a secondary winding of the transformer.

Claim 15 (New): The discharge lamp lighting apparatus according to claim 12, wherein ON/OFF timings of the power supply switching element are determined on the basis of a period of a current passing through the first switching element and the second switching element.

Claim 16 (New): The discharge lamp lighting apparatus according to claim 15, wherein ON/OFF operations of the power supply switching element are performed by a time period that is $N/2$ times a period (where N is a natural number) of a current passing through the first switching element and the second switching element.

Claim 17 (New): The discharge lamp lighting apparatus according to claim 11, wherein power supply timings from the DC power supply to the discharge lamp are determined on the basis of a period of a load current.

Claim 18 (New): The discharge lamp lighting apparatus according to claim 11, wherein an operation performing intermittently the power supply is performed at the time of the cold start of the discharge lamp.

Claim 19 (New): The discharge lamp lighting apparatus according to claim 11, wherein an operation performing intermittently the power supply is performed when the impedance of the discharge lamp is low.

Claim 20 (New): The discharge lamp lighting apparatus according to claim 12, wherein the LC resonance circuit includes:

- a first inductance element connected in series to a secondary winding of the transformer;

- a series resonance circuit connected to a secondary side of the transformer and including a second inductance element and a first capacitor; and

- a parallel resonance circuit connected to the secondary side of the transformer, and including a third inductance element and a second capacitor.

Claim 21 (New): The discharge lamp lighting apparatus according to claim 12, wherein the inductance used in the LC resonance circuit is formed of a leakage inductance of the secondary winding of the transformer.

Claim 22 (New): A discharge lamp lighting apparatus comprising:

- a DC power supply for supplying power to a discharge lamp;

- a transformer for transmitting a voltage of the DC power supply to the discharge lamp;

- a power supply switching element connected between the DC power supply and a primary side of the transformer; and

- a first switching element and a second switching element that are connected to the primary side of the transformer,

wherein there are provided: a term to supply power from the DC power supply when the power supply switching element is turned on, and either the first switching element or the second switching element is turned on; and a term to pass a current through the primary side of the transformer when the power supply switching element is turned off, and the first switching element and the second switching element are turned on at the same time,

whereby power is intermittently supplied from the DC power supply to the transformer, and when power is not supplied from the DC power supply to the transformer, a current passing through the primary side of the transformer is circulated.

Claim 23 (New): The discharge lamp lighting apparatus according to claim 11, wherein the discharge lamp is a high intensity discharge lamp.

Claim 24 (New): The discharge lamp lighting apparatus according to claim 22, wherein the discharge lamp is a high intensity discharge lamp.